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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/420,055	10/18/1999	YOSHIO OSAKABE	450100-02144	2279

20999 7590 03/16/2004
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NEW YORK, NY 10151

EXAMINER

CHEN, ALAN S

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 03/16/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.



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Office Action Summary

Application No.

09/420,055

Applicant(s)

OSAKABE ET AL.

Examiner

Alan S Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-17 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 14, first paragraph, the word "to" is misspelled.

On page 14, second paragraph, the unit "μs" is misspelled (applicant uses μm).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 13 and 14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 13 recites the limitation "the pre-set function block" in line 2 of claim 13. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 14 is rejected based on a rejected base claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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7. Claims 1-3, 5, 6 and 9-12, 15 and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by No. 5,764,761 to Vicard.

8. As per claim 1, Vicard discloses an electronic equipment (Fig. 1 and Summary of Invention, where equipment can be a hard drive) comprising: a unit (Fig. 1) as a logical assembly (consists of logic and is logically assembled, e.g., the encryption key input by the user is stepped through several logical/functional units) furnishing real functions (for protection against internal physical access in the case of an internal hard driver or other real threats concerning privacy of contents on the hard drive); and at least one subunit in said unit (Fig. 1, elements 11 and 12), said subunit being lower in order than said unit (input comes in the unit, elements 21, 27 and 29, subunits at a lower order, e.g., receiving it secondarily and processing parts of the signals) being an assembly for realizing logical functions (logic of the subunits processes the encryption keys); said subunit including at least one function block (Fig. 2, elements 12A-E), said function block being lower in order than said subunit and being an assembly for realizing logical functions (functional block processes signal signatures, Column 4, lines 43-50).

9. As per claim 2, Vicard discloses claim 1, wherein said subunit (Fig. 4b, element 11 of the first module) includes a function block (Fig. 2, elements 12A-E) having a function in common with that of function blocks provided in different types of subunits (Fig. 4b, element 11 of the second module, being different since one has a Chip Key O/P, while the other one doesn't).

10. As per claim 3, Vicard discloses claim 1, further comprising: communication means for having communication with an external equipment (Fig. 1, elements 13-15, 21, 22, 27 and 29); wherein communication is had via said communication means between said unit, subunit or the

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function block and a unit, a subunit or a function block of said external equipment (communication between the security module and the hard drive or security module and another security module as in Fig. 4).

11. As per claim 5, Vicard discloses claim 1, wherein the electronic equipment (Fig. 1) is a data transmission control device for controlling data transmission (controls whether data can be transmitted from Fig. 1, elements 13-15).

12. As per claim 6, Vicard discloses claim 3, wherein said function block includes inputting means for inputting a control command (Fig. 1, element 29 is a control command signal that tells the module to take in the encryption key into the register Fig. 1, element 25); and control means for controlling the function of said function block based on said control command (the function block in Fig. 2, takes in single keys of signature of what was input); said control command including the information specifying the type of the function block (the control command triggers read into register, based the position of the bits in the register, e.g., big endian or little endian, that dictates what the function blocks in Fig. 2 take in, therefore the data inherently has the information of big endian or little endian built into it); the information specifying said function from plural function blocks of the same type (Fig. 2, function blocks are the same type of blocks); and the control information specifying the type of the control for said function block (Comparison block has logic e.g., whether the input signature bits should be logically ANDed, ORed, etc, e.g., Fig. 2, element 18).

13. As per claim 9, Vicard discloses method for transmitting data to a. control device including a unit as a logical assembly furnishing real functions (Fig. 1); at least one subunit in said unit (Fig. 1, elements 11 and 12), said subunit being lower in order than said unit (input

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comes in the unit, elements 21, 27 and 29, subunits at a lower order, e.g., receiving it secondarily and processing parts of the signals) and being an assembly for realizing logical functions (logic of the subunits processes the encryption keys); and at least one function block (Fig. 2, elements 12A-E), said function block being lower in order than said subunit and being an assembly for realizing logical functions (functional block processes signal signatures, Column 4, lines 43-50); wherein the data transmitting method includes a step for transmitting a control command for controlling said function block (once the write command Fig. 1, element 29 enables write, logic in elements 25 and 27 writes single keys to function block).

14. As per claim 10, Vicard discloses claim 9, wherein the transmitting step includes a unit transmitting step for transmitting said data to said unit of said control device (Fig. 1, element 27); a sub-unit transmitting step for transmitting said data transmitted to said unit to said subunit (Fig. 1, element 19); and a function block transmitting step for transmitting said data transmitted to said unit to said function block (Fig. 1, elements 13-15).

15. As per claim 11, Vicard discloses claim 9, wherein said data includes the information specifying the type of said function block (the control command triggers read into register, based the position of the bits in the register, e.g., big endian or little endian, that dictates what the function blocks in Fig. 2 take in).

16. As per claim 12, Vicard discloses claim 9, wherein said data includes the information for specifying one of the plural function blocks of the same type (the control command triggers read into register, based the position of the bits in the register, e.g., big endian or little endian, that dictates what the function blocks in Fig. 2 take in and the function blocks are the same type of

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blocks, therefore the data inherently has the information of big endian or little endian built into it) housed in one sub-unit (subunit is the gating circuit, Fig. 1, element 18).

17. As per claim 15, Vicard discloses claim 9 further comprising transmitting a control command for controlling the function block (Fig. 1, element 29, the write commands dictates the encryption key that goes into the function blocks).

18. As per claim 16, Vicard discloses claim 9 further comprising transmitting data for modifying the control command for controlling the function block (retransmitting the write control signal, Fig. 1, element 29, causing the original write command encryption key to be modified with another).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 4 and 17 are rejected under 35 USC 103(a) as being unpatentable over Vicard in view of No. 5,941,963 to Charles et al. (hereafter Charles).

21. Vicard discloses claims 1 and 9 respectively.

Vicard does not disclose expressly the communication means between the electronic equipment and external equipment conforming to 1394.

Charles discloses an external hard drive (Fig. 2, element 10, being the external equipment) that communicates with a laptop (Fig. 2, element 14, being the electronic equipment) over IEEE 1394, citing 1394 as a popular external communication bus.

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Vicard and Charles are analogous art because they are from the same field of endeavor in hard drive communication with a host.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the encryption/password technique of Vicard to protect the external hard drive of Charles.

The suggestion/motivation for doing so would have been the extra security needed when a hard drive is external as opposed to internal. Vicard stresses the need to protect internal hard drives because internal hard disk protection is often overlooked since it is inside the computer chassis. Hence, external hard require even more protection due clear exposure to potential physical and/or data theft.

Therefore, it would have been obvious to combine Vicard with Charles for the benefit of encryption and extra security on an external hard drive.

Allowable Subject Matter

22. Claims 7 and 8 are allowed.

The following is the statement of reasons for the indication of allowable subject matter:

The prior art disclosed by the applicant and cited by the Examiner fail to teach or suggest, alone or in combination, an electronic equipment for controlling an external electronic equipment comprising control command actuating means for specifying the type of the control command and control command generating means for generating a control command based on actuation of said control command actuating means.

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23. Claims 13 and 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to :

U.S. Pat. No. US005748254A to Harrison et al.

U.S. Pat. No. US006122572A to Yavnai

U.S. Pat. No. US006295633B1 to Murakawa

U.S. Pat. No. US006430358B1 to Yuen et al.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S Chen whose telephone number is 703-605-0708. The examiner can normally be reached on M-F 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 703-308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ASC
2/27/2004

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke at the bottom.

**REHANA PERVEEN
PRIMARY EXAMINER**